Version With Markings to Show Changes Made Under 37 C.F.R. 1.121(c)(1)(ii)

Please amend the claims by deleting the bracketed word(s) and inserting the underlined word(s) as indicated.

Please rewrite Claims 2, 14, 32 and 33 as follows:

2. (Amended) The composition of Claim 1, wherein said biodegradable polymer is selected from poly(hydroxy alkanoates), poly(alkylene succinates), polycaprolactones or [mixtures] combinations thereof that are hydrolytically degradable.

14. (Amended) The composition of Claim 1, wherein said biodegradable polymer is selected from poly(hydroxy alkanoates), poly(alkylene succinates), polycaprolactones or [mixtures] combinations thereof, and said polar monomer, oligomer, or polymer is selected from 2-hydroxyethyl methacrylate, polyethylene glycol methacrylate [or analogs thereof], and said water-soluble polymer is selected from polyethylene oxide, polyvinyl alcohol, sulfonated polyester, hydroxypropyl cellulose, polyacrylamide or polyacrylic acid.

32. (Amended) Water-sensitive polymer blends of a modified, biodegradable polymer selected from poly(hydroxy alkanoates), poly(alkylene succinates), polycaprolactones or [mixtures] combinations thereof that are hydrolytically degradable and a modified water-soluble polymer.

33. (Amended) Water-sensitive polymer blends of modified poly(ethylene) oxide and modified poly(hydroxy alkanoates), poly(alkylene succinates), polycaprolactones or [mixtures] combinations thereof that are hydrolytically degradable.

REMARKS

The Office Action:

Claims 1, 2, 4, 5, 7, 12, 14-20, 32 and 33 are pending in the present application. Claims 1, 2, 4, 5, 7, 12, 14-20, 32 and 33 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Claims 1, 2, 4, 5, 7, 12, 14-20, 32 and 33 were rejected under 35 U.S.C. §102(b) as being completely anticipated by, or alternatively under 35 U.S.C. §103(a) as obvious over, the Chem. Abstracts abstract to Avella et al. (CA 1998:605333). Claims 1, 2, 4, 5, 7, 12, 14-20, 32 and 33 were provisionally rejected based on obviousness-type double patenting in view of the co-pending applications Serial Nos. 753,077; 752,810; and 753,223. Applicants respectfully traverse the foregoing rejections.

Rejection of the Claims Under 35 U.S.C. §112:

Claims 1, 2, 4, 5, 7, 12, 14-20, 32 and 33 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite. The rejection states that the term "water soluble" renders the claim unclear since water solubility is a matter of degree, and, therefore, relative. Applicants respectfully disagree. It is respectfully submitted that people skilled in the art use the terms "water soluble" and "water insoluble" extensively, and know the difference between those terms. For example, the Encyclopedia of Polymer Science and Engineering, vol. 17, page 730 (1986) devotes a 54 page chapter to "water-soluble polymers." Furthermore, on page 21, lines 1-5 of the present application, it is stated:

> Water-soluble polymers with which the modified biodegradable polymers of the present invention can be blended include polyethylene oxide, polyvinyl alcohol, hydroxypropyl cellulose, polyarylamide, sulfonated polyesters and polyacrylic acid.

Thus, the present application provides several examples of what is meant by water-soluble polymers. Accordingly, it is respectfully submitted that those skilled in the art would know and understand what is meant by the term "water-soluble." That is all that Section 112 requires.

The rejection also states that the use of the term "analog" or "analogs" renders the claims unclear since it is subjective as to when one material is an analog of another. Applicants are amending herewith Claim 14 to remove the term "analogs" therefrom. Applicants submit that this amendment overcomes the present rejection.

The rejection further stated that Claim 33 was unclear due to the use of the term "or mixtures thereof." Applicants are amending herewith Claim 33 to remove the term "or mixtures thereof" and to substitute therefor the term "or combinations thereof." Applicants submit that this amendment overcomes the present rejection.

In view of the foregoing, applicants respectfully submit that Claims 1, 2, 4, 5, 7, 12, 14-20, 32 and 33 are not indefinite, and request that the rejection of those claims under Section 112 be withdrawn.

Rejection of the Claims Under Sections 102 and 103:

Claims 1, 2, 4, 5, 7, 12, 14-20, 32 and 33 were rejected under 35 U.S.C. §102(b) as being completely anticipated by, or alternatively under 35 U.S.C. §103(a) as obvious over, the Chem. Abstracts abstract to Avella et al. (CA 1998:605333). The rejection states that Avella et al. discloses a composition containing polymethyl methacrylate and poly methyl methacrylate grafted to PHP, which is encompassed by applicants' grafted biodegradable polymer. The rejection further contends that polymethyl methacrylate may be slightly water soluble, and, therefore, meet the limitations of the present claims. Applicants respectfully disagree.

The Polymer Handbook, vol. 17, page 382 (1989) (copy attached as Exhibit 1) provides a list of solvents for poly(methyl methacrylate). Water is not included as a solvent for poly(methyl methacrylate). Therefore, it is respectfully submitted that poly(methyl methacrylate) is not water soluble. Applicants further submit that they have rebutted any alleged showing by the examiner. Applicants submit that since Avella et al. does not disclose a water soluble polymer, it cannot form a basis for rejecting the present claims. Accordingly, applicants respectfully request that the rejection of Claims 1, 2, 4, 5, 7, 12, 14-20, 32 and 33 under 35 U.S.C. §102(b) and 103(a) should be withdrawn.

Applicants respectfully request reconsideration of the present application in view of the foregoing remarks. Applicants submit that all claims are in condition for allowance. Accordingly, an early Notice of Allowance is respectfully requested. Such action is courteously solicited. Applicants further request that the Examiner call the undersigned counsel if allowance of the claims can be facilitated by examiner's amendment, telephone interview or otherwise.

Respectfully submitted,

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TABLE 1. *cont'd*

Polymer	Solvents	Nonsolvents	Refs.
Poly(3,4-dihydroxypent-1-ene-1,5-diyl)	DMSO, methanol	Ethanol	44
Poly(1,1-diphenyl-2-vinylcyclopropane)	Chloroform	Methanol	45
Poly(*p*-anthrylphenylethylene)	Bzn., chlorobenzene, methylene chloride	Methanol, ethanol, hexane, W	46
Poly(1-methylbicyclo-[2.2.1]-hept-2-ene)	Chlorobenzene, *p*-xylene	Methanol	47
Poly(vinylborazine)	Bzn.	Pentane	48
Poly(methylene-*alt*-5-hydroxycyclohexane-1,3-diyl)	Hexanes		49
Poly(ethylene-*co*-1,4-hexadiene) (97 : 3)	Toluene		50
Poly(ethylene-*co*-1-cyano-1,4-butylene) (1 : 2)	Acetone (hot), chloroform, DMA, DMSO	Methanol	51
Poly(isobutylene-*co*-4-methylstyrene) (95 : 5)	Chloroform		52
Poly[hexene-*co*-*N*,*N*-di(isopropyl)amino-1-pentene] (2 : 3)	Hexane		53

1.3. POLY(ACRYLICS), POLY(METHACRYLICS)

1.3.1. POLY(ACRYLIC ACIDS)

Poly(acrylic acid)			
atactic	Alcohols, dil. alkali solutions, formamide, DMF, W	Dioxane (hot) (sw), esters, hydrocarbons, ketones	4–6, 13,54
isotactic	Dioxane/water (80/20)	Dioxane	55
Poly(methacrylic acid)			
atactic	Alcohols, aqu. hydrogen chloride (0.002 M, > 30°C), dil. aq. sodium hydroxide, W	Carboxylic acids, esters, hydrocarbons, ketones	4,5
isotactic, syndiotactic	W(partially)		56
Poly(acrylic acid-*co*-9-vinylphenanthrene) (3 : 2)	THF		57
Poly(itaconic acid)	DMF, methanol, W	Acetone, aniline, bzn., carbon disulfide, chloroform, ethanol, ethyl acetate, THF	58

1.3.2. POLY(ACRYLATES)

General	Aromatic hydrocarbons, chlorinated hydrocarbons, esters, ketones, THF	Aliphatic hydrocarbons, hydrogenated naphthalenes, diethyl ether	
Poly(methyl acrylate)	See General, acetone, bzn., ethyl acetate, glycol ester ethers, phosphorus trichloride	Alcohols, carbon tetrachloride	5,7, 30,59
Poly(ethyl acrylate)	See General, acetone, butanol, bzn., glycol ether, methanol, THF, *p*-xylene	Aliphatic alcohols C > 4, cyclohexanol, tetrahydrofurfuryl alcohol	5,7, 30,59
Poly(2-hydroxyethyl acrylate)	Methanol, W		32
Poly(*n*-butyl acrylate)	See General, butanol, turpentine	Cyclohexyl acetate, ethanol, ethyl acetate, methanol	30
Poly(*tert*-butyl acrylate)	Acetone, methanol		7
Poly(4-hydroxybutyl acrylate)	Isopropanol		32
Poly(isobornyl acrylate)	THF		60
Poly(cyclohexyl acrylate)	Bzn., THF, toluene		32
Poly(2-ethylhexyl acrylate)	Esters, ketones, THF, toluene		32
Poly(benzyl acrylate)	Bzn., THF, toluene		32
Poly(5-cyano-3-thiapentyl acrylate)	Acetone, acetonitrile, dioxane, pyridine	Solvents of low solubility parameter	61
Poly[1-(*N*-ethyl-*N*-(1,4,7,10,13-pentaoxacyclopentadecyl)carbamoyl)ethylene]	Bzn., chloroform	Hexane	62
Poly(pentachlorophenyl acrylate)	Bzn., THF	Hexane, methanol, W	63
Poly(4-[10,15,20-triphenylporphorin-21*H*,23*H*-5-yl]phenyl acrylate)	Bzn., chloroform, THF, trifluoroacetic acid	Acetone, ethanol, hexane, methanol, W	64
Poly(vinylcyclohexane-*co*-methyl acrylate) (9 : 1)	THF	W	65

1.3.3. POLY(METHACRYLATES)

General	Acetic acid, acetone, bzn., chlorobenzene, chloroform, cyclohexanol (hot), cyclohexanone, cyclohexyl acetate, dioxane, 2-ethoxyethanol, ethyl acetate, isobutanol (hot), isobutyric acid, MEK, methylene chloride, xylene	Castor oil, cyclohexane, diethyl ether, ethylene glycol, formamide, gasoline, glycerol, hexane, methanol, nujol	

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TABLE 1. *cont'd*

Polymer	Solvents	Nonsolvents	Refs.
Poly(methyl methacrylate) atactic	See General, ethanol/water, ethanol/carbon tetrachloride, isopropanol/MEK (1/1) above 25°C, formic acid, nitroethane	Butylene glycol, carbon tetrachloride, *m*-cresol, diethyl ether, ethanol (absolute), higher esters, hydrogenated naphthalenes, linseed oil, turpentine	4,5,13, 30,66,67
	Acetone, acetonitrile, bzn., MEK, THF		7,32
isotactic	See isotactic		32
syndiotactic	Bzn., toluene		A32
Poly(methyl methacrylate-*co*-2-acrylamido-2-methyl-1-propanesulfonic acid) (95 : 5)	See General, carbon tetrachloride, ethanol (hot), ethyl ether, ethyl acetate, formic acid, isopropanol above 37°C, tetralin, turpentine (hot)	Alcohols, cyclohexane	5,7,67,68
Poly(ethyl methacrylate)	DMF, methanol, methyl Cellosolve®		32
Poly(2-hydroxyethyl methacrylate)	See General, carbon tetrachloride, castor oil (hot), cyclohexane (hot), diethyl ether, ethanol, gasoline (hot), linseed oil (hot), turpentine	Formic acid	67
Poly(*n*-propyl methacrylate)	See General, carbon tetrachloride, castor oil (hot), cyclohexane, diethyl ether, ethanol (hot), gasoline, hexane, isopropanol above 23.7°C, linseed oil (hot), nujol (hot), turpentine	Ethanol (cold), formic acid	5,13,30, 67–69
Poly(*n*-butyl methacrylate) and Poly(isobutyl methacrylate)	Acetone, MEK, methylene chloride, THF, toluene		32
Poly(butyl methacrylate-*co*-*t*-butyl methacrylate) (1 : 1)	Isopropanol above 33°C, MEK		5
Poly(*n*-hexyl methacrylate)	Bzn., dioxane, THF		32
Poly(cyclohexyl methacrylate)	Bzn., THF	Methanol	70
Poly(cyclohexylmethyl methacrylate)	*n*-Butanol, MEK		5
Poly(*n*-octyl methacrylate)	Bzn., MEK, THF		32
Poly(2-ethylhexyl methacrylate)	Bzn., THF		32
Poly(*n*-decyl methacrylate)	*n*-Pentanol above 29°C, isopropyl acetate, MEK	Ethyl acetate, methanol	5,71
Poly(*n*-lauryl methacrylate)	Bzn., MEK, THF, toluene		32
Poly(phenyl methacrylate)	Bzn., chloroform, dioxane, THF		32
Poly(benzyl methacrylate)	Acetone		5
Poly(4-*tert*-butylphenyl methacrylate)	Bzn.		696
Poly[(4-(*tert*-butyoxycarbonyloxy)phenyl) methacrylate]	Bzn.	Methanol	72
Poly(bornyl methacrylate)	Bzn., THF, toluene		32
Poly(isobornyl methacrylate)	Bzn., toluene		32
Poly[2-(dimethylamino)ethyl methacrylate]	THF		73
Poly[(2-trimethylsiloxy)ethyl methacrylate]	Aniline (hot, partially), diphenyl ether (hot), nitrobenzene (hot)	MEK	74
Poly[2-(*N*-carbazoyl)ethyl methacrylate], crystalline	Acetone, acetonitrile, ethyl acetate, THF	Bzn., chloroform, methanol	75
Poly(cyanomethyl methacrylate)	THF	Methanol	76
Poly[2-(4-phenylazophenyl)ethyl methacrylate]	Ethanol (hot), methanol	Acetone, bzn.	77
Poly[(methacryloyloxyundecyloxycarbonyldecyl)-2-(trimethylamino)ethyl phosphate]	Chloroform, THF, bzn., methylene chloride, *o*-dichlorobenzene, W	Hexane, methanol	78
Poly[4-(4-methoxyphenyloxycarbonyl) phenoxyhexamethylene methacrylate]			79
Poly[2-(dimethylamino)ethyl methacrylate-*co*-acrylamide] (4 : 1 to 2 : 3)			80–82
1.3.4. POLY(DISUBSTITUTED ESTERS)			
Poly(dimethyl itaconate)	Acetone, acetonitrile, bzn., DMF, furfurol, halogenated hydrocarbons, methyl acetate, nitrobenzene, nitromethane, THF	Aliphatic hydrocarbons, carbon tetrachloride, diisopropyl ether, ethanol, ethyl acetate, methanol, propylene carbonate, toluene, W	81
Poly(di-*n*-butyl itaconate)	Acetone, amyl acetate, dioxane, ethanol, halogenated hydrocarbons, hydrocarbons, methyl acetate, THF	Acetonitrile, DMF, furfurol, methanol, nitrobenzene, nitromethane, propylene carbonate	
Poly(diphenyl itaconate)	Bzn., chloroform, dioxane, DMF, ethyl acetate, THF		